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ABSTRACT

Two essays are presented in this monograph, the first in a series of publications examining educational finance and using Illinois data. After an introduction, the first essay replies to a "Forbes" magazine cover story on educational finance that asks if education is economically efficient. The central theme is that the maintenance of a large, well-financed, public educational system is central to the continued existence of a democratic society, and that economic efficiency should not be the highest priority in education. Selected readings and an appendix graphically depicting the concepts of equity and adequacy conclude this essay. The second essay is an inquiry into the normative foundations of American school finance and uses the works of the founders of the field of school finance written at the beginning of the century to support the suggestion that school finance policy issues are as deeply embedded in American political philosophy and in the history of the Republic as they are in economics and technical analysis. It is argued that the Republic and in fact civilization is in danger without an adequate, equitable, and efficient school finance system. Forty notes conclude this essay.
(WTH)

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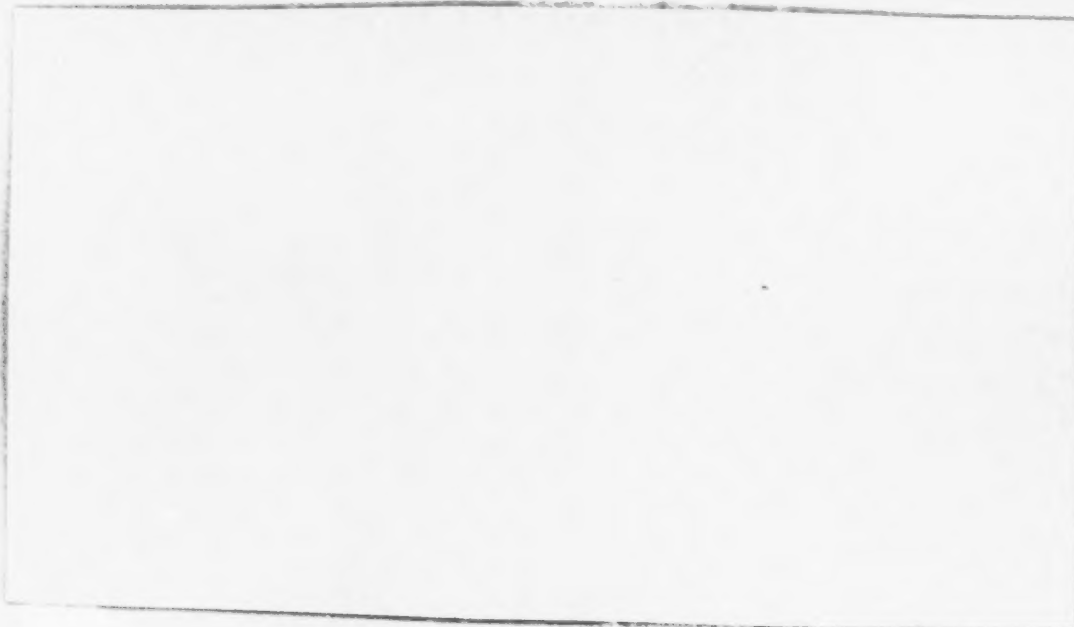
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G. Alan Karnes-Wallis Hickrod
and
James Gordon Ward

Center for the Study of Educational Finance
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This series of monographs is dedicated to Professor Lucy Jen Huang Hickrod, late of the Sociology Department of Illinois State University. Illness has forever taken Professor Huang Hickrod from intellectual labors, but she remains an inspiration to her husband, her family and her many friends. Sic transit Gloria Mundi.

INTRODUCTION

The John D. and Catherine T. MacArthur Foundation and the Lyle Spencer Foundation have joined to support a series of studies in educational finance using Illinois data. A series of monographs will be issued from the Center for the Study of Educational Finance at Illinois State University with this joint foundation support. This is the first in that series of publications. Many of these studies will be of a quantitative nature replete with the tables and charts that dominate most publication in the field of school finance. However, this first publication is not of that nature. We have elected to start our new series of publications with a monograph that is essentially conceptual and historical in nature.

The "MacSpence" project, as it is known to many, centers around three basic concepts in school finance: equity, adequacy, and efficiency. We would not wish it thought, however, that these three notions spring full-grown from the brow of Zeus, nor that they descended from the heavens like that more well-known trinity of orthodox Christian faith. To the contrary, this particular trinity is the product of the minds of many men, laboring over many centuries. This monograph will provide documentation of that claim. It may be of particular service to those who are looking into the field for the first time. It may also be of use to legislators who must defend appropriations for public education, year in and year out; and who, therefore, must address themselves to basic value questions again and again.

The first essay, as the subtitle implies, is almost Victorian in substance and in style. The central theme is a very familiar one; e.g., that the maintenance of a large, well-financed, public educational system is central to the continued existence of a democratic society. One might think that this chestnut had been roasted enough. However, the need to continually restate this thesis was demonstrated again in 1986 by a cover story in a major business magazine which concluded that the United States was spending too much for what it got in return in the field of public education. The first essay was drafted partially in reply to that story. However, it is, in the main, a nineteenth-century approach, and if it had any single model at all, it would probably be the works of Lord Acton, on whom it strongly relies.

If the first essay is Victorian, then the second is Edwardian. Professor Ward has gone back to the first textbooks in school finance written at the beginning of this century and has found ample precedent in the works of the founders of this field for the notions of equity, adequacy, and efficiency. In particular, his essay highlights the work of Ellwood P. Cubberley whose 1905 textbook is normally regarded as the beginning of systematic instruction in school finance. Both argue that the Republic is in danger without an adequate, equitable, and efficient school finance system. Indeed, if the argument of the first essay is accepted, then far more than the American political experiment of the late nineteenth century is at stake. It is pleaded before the bar of public opinion that a nation is not at risk here; a civilization is at risk.

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A REPLY TO THE "FORBS" COVER STORY OR
THE POLITICAL THEORY OF SCHOOL FINANCE REVISITED:
A VICTORIAN ESSAY

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We are not sure the micro-computer is a boon or a bust. Various parts of this article have been moved around so often the structure of it may now look very much like scrambled eggs. It started out to be a review of some elements of classical political theory which might act as some basis of funding education in the United States. That exercise will still be found here. However, before we could get well into that piece of work, the *Forbes Magazine* cover story entitled, "Are We Spending Too Much on Education?" appeared. It deserves an answer and will undoubtedly get many answers from the academic community. Let us say first of all that we do believe the question of economic efficiency is a perfectly legitimate one to pose and to try to answer. At times Mr. Brimelow appears to think that we educators are of the tribe of the Tite Barnacles in Dickens' *Little Dorrit*. We do not run a "Circumlocution Office"; and, when asked about education, our monocle does not drop into our soup and we are not heard to exclaim, "Egad, Sir, he said he wanted to know, you know! Pervaded our department—without an appointment—and said he wanted to know!" The unvarnished truth, Mr. Brimelow, is that economic efficiency has not been very high on our list of priorities and the burden of this article is to explain to you, and to others like you, why that is so. Without doubt, scholars like Eric Hanushek, upon whom the *Forbes* story depends so strongly, will continue to move the question of economic efficiency toward the top of the agenda, and we will try to make a minor contribution toward that perfectly worthwhile endeavor later in this article. But even if we are not able to find the key to greater economic efficiency in education—even, heaven forbid, if we were as incompetent and inefficient as the Dickensian "Circumlocution Office"—we would still have to support public education in a democratic society.

About the time that B. C. Forbes was founding his very successful and well-written magazine, John Dewey was writing, "The concept of education as a social process and function has no meaning until we define the kind of society that we have in mind." All right, let us assume that most *Forbes* readers have in mind a democratic society. What kind of educational system is mandated by that initial assumption that we prefer a democratic society? Incidentally, that B. C. Forbes, himself, had that kind of society in mind can be deduced from his very excellent collection of quotations entitled "Thoughts on the Business of Life" which has not gone through many editions and sits on the desks of persons of all political shades and hues.

Given our democratic assumption, we need to explore the central theme of democratic governments and no better guide could be found than Thucydides. In Pericles' great funeral oration, he states:

It is true that we are called a democracy for the administration is in the hands of the many and not the few. But

while the law secures equal justice to all alike in their private disputes, the claim of excellence is also recognized, and when a citizen is in any way distinguished, he is preferred to the public service, not as a matter of privilege, but as a reward of merit. Neither is poverty a bar, but a man may benefit his country, whatever be the obscurity of his condition.

We pass without comment the observation that we are far indeed from the Athenian notion that public service was the most meritorious of services a citizen could engage in. The educational implication, at least to us, lies in the fact that poverty should not be a bar to contributions to the republic.

Dewey took a few more words than Thucydides, but essentially reached the same conclusion about democracy:

A democracy is more than a form of government; it is primarily a mode of associated living, of conjoint communicated experiences. The extension in space of the number of individuals who participate in an interest so that each has to refer his own action to that of others, and to consider the action of others to give point and direction to his own, is equivalent to the breaking down of those barriers of class, race, and national territory which kept men from perceiving the full import of their activity.

He then drew the educational implication: "Obviously a society to which stratification into separate classes would be fatal must see to it that intellectual opportunities are accessible to all on equable and easy terms."

Since we are seeking guidance from the world of classical antiquity, we would be remiss not to look to the man the world regarded as "THE" Philosopher, Aristotle. There is a sense in which Aristotle's study of fourth century Greek city states is the model of all empirical studies of governmental and economic arrangements of mankind. What did this father of social science conclude? In the fourth book of the *Politics* he states:

Thus it is manifest that the best political community is formed by citizens of the middle class, and that those states are likely to be well-administered in which the middle class is large, and larger if possible than both the other classes, or at any rate than either singly. . . . Great then is the good fortune of a state in which the citizens have a moderate and sufficient property; for where some possess much, and others nothing, there may arise an extreme democracy, or a pure oligarchy: or a tyranny may grow out of either extreme . . . And democracies are safer and more permanent than oligarchies because they have a middle class which is more numerous and has a greater share in the government, for when there is no middle class, and the poor greatly exceed in number, troubles arise and the state soon comes to an end.

It could be agreed by many—and has been agreed by many—that a strong and healthy middle class, the yeomanry of the world, is the key to a successful democracy. The problem, of course, is what to do if it isn't in place, or if it has decayed beyond repair. As Lord Acton makes clear in his essay on "Expectation of the French Revolution," many English and French writers knew decades in advance that class stratification had rendered eighteenth century France a powder keg just waiting for the match. As early as 1753, Lord Chesterfield said of France: "All the symptoms which I have ever met with in history previous to great changes and revolutions in government now exist and daily increase in France." Many notable Frenchmen—Voltaire, Turgot, Condillac—all lamented the division of French society prior to the revolution into the haves and the have nots. The later even predicted that the masses after tiring of the struggle with the "haves" would "give themselves to a master," thus predicting a good 30 years in advance the rise of Napoleon. Lord Acton may well have been the most learned man in nineteenth century England, but this essay is most distressing to anyone or any group who believe that they can change the course of history and the destiny of countries.

But some men have believed that stratification of society could be avoided or at least modified. Charles Dickens' epic protests against the mid-eighteenth century English world of bleak houses, hard times, debt prisons and workhouses are read and re-read to this day. Others, Karl Marx, notably, rejected Aristotle's conclusions and created a world without classes, middle or any other. How does all this relate to education and educational finance? Nineteenth century writers had no trouble in making the relationship. Caleb Mills saw a direct connection between public education and the creation of a strong middle class. Indeed, Mills' statement deserves publication in *Forbes Magazine* just as he wrote it:

Is not the rich land-holder interested, to the full amount of his property, in the intellectual and moral character of the community in which it is located? Will not this value be enhanced by the intelligence and virtue, and lessened by the ignorance and vice of the surrounding neighborhood? Should he not be required to bear his fair proportion of the expense of that intellectual and moral culture which materially and manifestly affects his pecuniary interests? . . . Is not the merchant also interested to the full amount of his stock in trade, in the intelligence and integrity of the community in which he does business? Would he find so large a share of his profits engulfed in the whirlpool of bad debts if the people were honest? . . . Can the manufacturer invest his capital with equal security among an ignorant and vicious people, that he would in an intelligent and virtuous community?

Apparently, the Indiana legislature was convinced by the arguments of this professor in a private college in Indiana, for they shortly thereafter established a publicly-supported educational system and made him the first superintendent thereof. This should surprise no one, however. Mills had taught his twelve students at Wabash College to read Thucydides in the original—no English translation needed. Of course, he understood the relationship of education to democracy and so did his pupils.

It must be admitted, however, that the contribution of education to the stability of society, especially to its internal stability and to its economic life, was not the leading point in the argument to publicly subsidize education. It was the political, not the economic side of the argument, that was always pressed strongest. The classic statement is from a good student of both Thucydides and Aristotle, e.g., Thomas Jefferson:

. . . it becomes expedient for promoting the public happiness that those persons whom nature hath endowed with genius and virtue should be rendered by liberal education worthy to receive and able to guard the sacred deposit of the rights and liberties of their fellow citizens and that they should be called to that charge without regard to wealth, birth, or other accidental condition of circumstance; but the indigence of the greater number disabling them from so educating, at their own expense, those of their children whom nature hath fitly formed and disposed to become instruments of the public, it is better that such be sought for and educated at the common expense of all.

Horace Mann argued much in the same vein as he strove to establish free public education in the United States. He also placed the responsibility for provision of education squarely with the legislative bodies:

No man is worthy the honored name of a statesman who does not include the highest practicable education of the people in all his plans of administration. He may have eloquence, he may have knowledge of all history, diplomacy, jurisprudence; and by these he might claim, in other countries, the elevated rank of a statesman; but, unless he speaks, plans, labors, at all times and in all places for the culture and edification of the whole people, he is not, he cannot be, an American statesman.

The relationship between education and educational finance was not lost on Baron Acton:

In a society organized like our own [England of the 1860's], it is desirable that education should be fitted, in nature and degree, to the special character and occupation of the several ranks of life to which each man belongs, but in a country where there is no distinction of class, a child is not born to the station of its parents, but with an indefinite claim to all the prizes that can be won by thought and labor. It is in conformity with the theory of equality to check the causes which disturb it, and to give as near as possible to every youth an equal start in life. Every American is a self-made man, and they are unwilling that any should be deprived in childhood of the means of competition. Therefore, in several states a system of instruction was introduced which enabled a pupil to advance from the first rudiments of knowledge to the end of a university course, and to prepare himself for the learned professions without payment of a single shilling.

This interesting connection between certain countries and their educational systems was also observed by Lord Macaulay. Speaking of the Scottish Act for the Settling of Schools in 1696, he says:

By this memorable law it was, in the Scotch phrase, statuted and ordained that every parish in the realm should provide a commodious schoolhouse and should pay a moderate stipend to a schoolmaster. The effect could not be immediately felt. But, before one generation had passed away, it began to be evident that the common people of Scotland were superior in intelligence to the common people of any other country in Europe. To whatever land the Scotchman might wander, to whatever calling he might betake himself, in America or in India, in trade or in war, the advantage which he derived from his early training raised him above his competitors.

That the Scots themselves appreciated the difference between their educational system and that of England is evident from the stipulation in the Act of Union that not only should the established church of Scotland be different from that of England but that their educational system should be, and is to this day, independent of that of England.

To be sure, much of this was religiously inspired. After all, a Scot could hardly sign a covenant with God unless he could both read the Covenant and sign his own name to it. The Covenanters, driven from their homes in southwest Scotland and from Ulster, carried that deep faith in education with them to the United States. No ethnic group has had more of its descendants to occupy the White House than the Scotch-Irish. No ethnic group established more colleges than the Scotch-Irish. Indeed, the rude forest clearing of a Scotch-Irish settlement always included two buildings before the settlers themselves had a roof over their own heads: the kirk and the academy. Indeed, many a British officer observed that the war in the Carolinas might have been won had not it been for the implacable hatred of the Scotch-Irish for the House of Hanover, and all it stood for. It cannot be claimed, however, that education is always and in all cases an encouragement to toleration. There is in fact an old Scotch-Irish prayer: "God grant that I may always be right, for thou knowest I am hard to turn."

Thus far we have argued that a well supported public education, e.g., an adequate education, is essential to the stability of the Republic both in keeping it from erupting into civil war and in keeping it from being pushed over from the outside (e.g., being overcome by its foreign competitors). We have also argued that if one is to maintain a democratic society that education must be widely dispersed; e.g., there must be many recruits into this system and at least some of these recruits must be allowed to work their way to the very top of the system. Apparently, this is exactly what the *Forbes* story objects to! "Educators sometimes argue that school productivity has fallen because of the social problems dumped on them, but this is an explanation, not an excuse. In practice, they never resist more recruits." You are correct, Mr. Brimelow, there is no way to "resist the recruits" if the brief connecting democracy with education is accepted by the court of public opinion to be compelling.

Perhaps liberals may find the argumentation to this point more to their satisfaction than conservatives, but there are some important considerations connected with public education that no conservative should overlook. No conservative worth his salt could ignore the famous observation of de Tocqueville:

Granted for an instant, that the villages and countries of the United States would be more usefully governed by a central authority, which they had never seen, than by functionaries taken from among them, admitting, for the sake of argument, that there be more security in America, and resources for society would be better employed there, if the whole administration centered in a single arm, still the political advantages which the Americans derive from their decentralized system would induce me to prefer it to the contrary plan. It profits me but little, after all, that a vigilant authority always protects me the tranquillity of my pleasures and constantly averts all dangers from my path, without my care or concern, if this same authority is the absolute master of my liberty and my life, and if it so monopolizes movement and life, that when it languishes, everything languishes around it, that when it sleeps, everything must sleep, and that when it dies, the state itself must perish.

In the same vein, not the best advocate of President Reagan's "new federalism" can improve on Baron Acton's comment: "If the distribution of power among the several parts of the State is the most efficient restraint on monarchy, the distribution of power among several States is the best check on democracy." Acton believed this with such intensity that it led him to support the South in the Civil War in spite of the fact that slavery was morally repugnant to him. The connection with education is simple enough. There is no possible way for de Tocqueville's "lesser associations" or Acton's "checks on democracy" to function without a well supported and easily accessible educational system. A centralized government seeks to concentrate power by limiting access to the educational system. A decentralized government seeks to widen access to the educational system. The "old school tie" with its graduates who expect a position in government as their birthright is admirably fitted to a tightly held centralized government.

As hard as it is for a life-long academic like the author of this article to admit it, Richard Simpson was not entirely wrong when he wrote: "Competitive education, therefore, is gradually forming a large class of young men whose interest it would be to remodel society on a bureaucratic basis, and to multiply offices, so that they might be able to gain their living by what they had learned at school." The "iron law of oligarchy" may turn out to be an ever recurring "Mandarin tendency" in all societies. It profits the Republic but little if the meritocracy of the twentieth century becomes the autocracy of the twenty-first century. If we are to believe Hodgkinson, there is already a tendency to have "high tech for the rich and low tech, or no tech for the poor."

Acton was surely right. There is something moving through history. It is far greater than the differences between Whigs and Tories, Democrats and

Republicans. As Acton noted, "The world owes religious liberty to the Dutch revolution, constitutional government to the English revolution, federal republicanism to the American revolution, political equality to the French revolution, etc., etc." It is hard to believe that this is all by chance. Acton found the one common denominator to be liberty. We find the one common denominator to be adequate education for all. These thoughts are not far apart. No conception of liberty is possible without an adequate education. No gallant call to defend those liberties, such as William of Orange's vowing to "die in the last ditch" rather than submit to Spanish slavery, is understandable without education. The "rights of an Englishman" are not comprehensible without adequate education. Ask the cop on the beat how hard it is to read illiterate men or women their "rights"; even if the founding fathers did enshrine them in a constitution rather than leave them to the sovereign will of parliament. Finally, ask the Frenchman how difficult it is to maintain those liberties so dearly won by the bloodiest of revolutions. We break with Acton on one important point. For him, and for generations of professional historians after him, it was enough to understand these forces; indeed, the task of understanding them took up all of one's life force. Affirmation or advocacy was not the role of the historian. We are not under such a self-denying ordinance. We advocate education as a means of moving this force, whatever you wish to call it, through history and into the future. Indeed, there is no livable future for many of us without it. If education turns out to be not much more than the medium by which the democratic ideal is moved through time and space, then it would be worth supporting adequately and equitably.

Within the *Forbes* article, "Are We Spending Too Much on Education?" are at least three questions and they relate to the three dimensions of educational finance which act as guidelines for current research in this area: e.g., adequacy, equity, and efficiency. Expressions like "too much" or "too little," of course, load the question, but a formulation like, "Are we spending an 'appropriate' or an 'adequate' amount on education?" is not loaded. It does, however, require a criterion to be established. Several come to mind, e.g., spending relative to other countries, spending relative to past points in time, spending adjusted for inflation, etc., etc. Professor James Gordon Ward addresses himself to this matter elsewhere in this monograph, and we shall do no more here than to try to distinguish between that kind of question and two other questions, all three of which are quite legitimate questions to pose to the educational community. The second question is whether we are spending in a fair or equitable manner. A brief appendix to this paper sets forth some simple graphic models to show that any given state might be at any given time more equitable and less adequate than another, or more adequate and less equitable than another, or that a single state might be moving toward one goal and not another at any point in time. They are, however, related concepts in that if the "adequacy" notion is thought of as a "floor" or "minimum," and if that "minimum" is deliberately moved up, then the variance in spending between school districts within a state must inevitably decrease. "Leveling up" is bound to make for both greater adequacy and for greater equity. "Leveling up," while greatly to be preferred to "leveling down," is expensive. It also always requires greater taxation and not lesser taxation and as such is not so well received on the conservative side of the aisle.

From the thrust of the *Forbes* paper, and even more from the citations it provides, we suspect that it is a third question, not related to either adequacy or equity, that is really the central concern of this nationally-recognized business magazine. To put it in more simple terms, it has to do with the value of service received for the dollar spent. It is an economic efficiency question. As such it is separate and distinct from the other two questions. It is surely possible for a society, a nation, a state, etc., to be spending at an adequate level, and even be spending in an equitable manner, but to be doing so in an economically inefficient manner. Granted that taken to the extremes this argument would not hold because given total inefficiency one could never be assured of achieving either adequacy or equity. But moderate inefficiency might well exist in the educational system, or the health system, or any number of other service professions, because there is no competitive structure to weed out inefficient services. One could ask of the legal and medical professions the same sorts of questions: e.g., inquiries relating to adequacy, equity, and efficiency. Some self-correcting competition may exist with fee-paid professionals, but it is surely not the free market structure that our friends at *Forbes* have in mind.

If the *Forbes* question can be reworded to say, "Are we spending money in education in the most appropriate way to maximize the return?", it is certainly more researchable. Regrettably, in the judgment of at least this author, we are nowhere near the answer to that question. The Hanushek article on which the *Forbes* piece so strongly depends is a fine review of the literature, but it is also replete with warnings about drawing public policy conclusions from econometric models that contain so very many measurement problems. Since we have clearly taken off our philosophic beret, let's put on our measurement helmet, and take a look at some of these problems in the "educational production function" area.

Some perplexing problems are encountered immediately in education, as indeed they are also in medicine and law with the production function notion. We will try not to repeat those problems well-covered in Hanushek, but simply hope to add to his analysis. First of all the dependent variable in these "production functions" is often a test score. A test score is perhaps a measurement of professional effectiveness, but how can it be a measurement of economic efficiency? If the dependent variable was cost per unit of test score achieved, we might be more inclined to accept it as a measure of economic efficiency, and we do have some empirical work underway at the Center for the Study of Educational Finance using that particular dependent variable. At this time, however, we are not ready to report the results of that empirical investigation which is being supported by the MacArthur and Spencer Foundations. This measurement matter is, however, but the tip of the proverbial iceberg.

If medical doctors, nurses, and the rest of the medical community direct their attention solely to the effectiveness of their treatments on their patients, why should one expect to find the medical system a model of economic efficiency? They do, of course, consider benefits, but it is not in the context of a benefit/cost ratio, but rather in the context of a benefit/risk ratio. It is true that in recent years, due largely to the pressure of the federal government, the medical profession has been forced to consider "cost containment" policies. However, that is a long way from paying as much attention to costs as to effectiveness. The same is true of the legal

profession. It is still the best defense or the best prosecution that is the aim of the advocate. A cheap, losing defense will still put his client behind bars, while an expensive, winning defense may well let him remain a free man. It is also of little solace to the dying patient to be informed that his failed operation or badly-prescribed medication was the result of cost-efficient procedures.

Forbes' highly-valued, private market system operates very, very imperfectly in both medicine and law. Therefore, it comes as no great surprise to anyone to find that it doesn't operate very well in education as well. So it may well be that educators place a much higher value on effectiveness than upon economic efficiency. This is the point at which privatization of education would normally be discussed. However, there are so many available treatments of that subject in the current literature that we feel we can add little except to note in passing that the private sector is much stronger in both law and medicine and neither one of these professions is the shining model of competition that some appear to call for in education.

It must also be noted that if we are right about education's having a unique function in history, a theme we developed in the first part of this article, then privatization of education would corrupt that function considerably. Dewey, as usual, put the point well:

Parents educate their children so that they may get on; princes educate their subjects as instruments of their own purposes. Who, then, shall conduct education so that humanity may improve? . . . Even the subsidy by rulers of privately conducted schools must be carefully safeguarded. For the rulers' interest in the welfare of their own nation instead of in what is best for humanity, will make them, if they give money for the schools, wish to draw their plans.

All of the above was occasioned simply by looking at the dependent variable in the "production function." Although we have many hats in our closet, we will eschew the psychometrician's chapeau and not even get into the complicated matter of whether tests can be used as measurements of output, and if so, what kind of tests can and should be used. We are more interested at the moment in looking at the structure of these educational production functions.

First of all, we seem to persist in looking for some general production function that fits all kinds of students under all kinds of conditions. That's an odd assumption to make since any practical experience in a classroom would tell the investigator that only certain kinds of treatments work with certain kinds of pupils. Therefore, one should expect to find different kinds of production functions for children from low income families, high income families, minority families, etc., etc. Hanushek, himself, started down this road in his early work, but does not seem to have carried it forward as far as it could go. Perhaps it is because there are endless variations on this: e.g., small pupil-teacher ratios do not work with students from more affluent families, only with those from poor families; highly-trained teachers work better with students from affluent families, but not with those students from poorer families; minority teachers do better with

minority students, and on and on. Admittedly, this is a formidable structure to model, but if educational production functions are to live up to their potential, it is into this kind of detail that one must go. With some notable exceptions, the literature at present consists of much more simple least squares equations; still looking for that "magic cipher," that simple, single equation, that will unlock it all. Sorry, we may not find a "Cobb-Douglas" production function in education.

In addition to the "single equation" fallacy, we have that monumental humbug, the "independence" assumption; that is, that the predictors or inputs into the function are independent and additive. Again, anyone, even vaguely acquainted with reality would know that this is never true in educational matters. There is always some intercorrelation between predictor variables, and in educational financial matters there is usually quite a great deal of intercorrelation. Look through Hanushek's excellent bibliography and find how many models are interactive and multiplicative. Very, very few, dear reader. Finally, we have an additional piece of nonsense, the "linear assumption." Unless all the laws of economics have been repealed by some omnipotent legislature, there is no reason whatsoever to expect that something as simple as the "law of diminishing returns" should not also apply to the economics of education as it does to the economics of nearly everything else. Again, look through all the educational production models you can find and report how many curvilinear explorations there are. Seldom are there even log transformations, let alone a quadratic function. There are exceptions, to be sure, especially where size of school district is under analysis.

If the tone of the above remarks is sharply critical, it is not done out of any deprecation of the efforts of many who have worked in this area. It is simply to say, as indeed does Hanushek, that there is a long, long way to go in this area before any broad policy pronouncements can be mounted on the basis of the empirical findings. Also, we may as well admit that since production functions are all *ex post facto* research, there are some things that we may simply never find out by this research technique. All *ex post facto* research has to take things the way they find them in society. That means that if two sets of numbers always and in all cases overlap, then what society has joined together no statistician can put asunder. The most troublesome example of intercorrelated variables in school finance is the high intercorrelations between family and income, district expenditure, and test scores. If enough high spending schools were located in poor areas we might then find out something about the effect of that spending on test scores. Unfortunately, poor children have poor schools and poor test scores, and rich children have rich schools and high test scores. Probably the only way to really know for sure the effect of different levels of educational spending on test scores is to set the investigation up on an experimental design basis. However, one immediately runs into major constitutional and administrative problems if that is even contemplated. Medicine has somehow been able to do this and the patients who got the placebo either didn't complain or they didn't know it or they didn't live to complain. Doctors bury their mistakes, lawyers fill the prisons with theirs, but the educators' mistakes are live, walking, talking specimens on the streets of society.

But *ex post facto* research is not all negative either. At least one is working with variables that society will allow. What if an experimental design did turn up the fact that a very low pupil-teacher ratio would work

wonders with children from low-income families? Suppose the ratio turns out to be five or six to one. How many cities could afford a five or six to one ratio in their public schools even for only compensatory education classes? Is there any way out of this dilemma? Yes, fortunately, there is, but it is not by means of the production function. In our judgment, if economic efficiency is to be improved, it will come by way of encouragement of cost-effectiveness studies. These are simple experimental designs to which costs have been assigned to the treatment variables. The theory and the techniques are well known, but the encouragement to do them has been sadly lacking in education. Off hand, we can think of no better investment of state funds than a categorical program that would encourage school districts to carry out reasonable experimentation with the proviso that not only should the educational effectiveness of each treatment be determined, but also that the comparative cost of each treatment being compared also be explored. Very likely the state departments would have to provide some "aid in kind" here as well as some aid in cash, but departments of economics, business, education, etc. in the universities should be able to provide the workshops to teach the methods to do cost-effectiveness research. The more plebeian cost-effectiveness research may provide much greater yield for the research dollar than the more elegant and patrician production function. It also requires far less statistical training to carry it off and to present the results to a local board of education.

It was the Christmas season of 1986 when this little piece was written. It is our practice to try to read something of Dickens every Christmas. We think it makes us appreciate more what little we do have. Having that weak type of intellect that reflects in its writing everything that it is currently reading, there is no way that we could end this article without reflecting something more from *Little Dorrit*, our current Dickensian interest. Mr. Brimelow, and Chairman Malcolm for whom you write, we assure you, the last thing—the very last thing—any businessman in his right mind would like to see is the grim, gray, spiked walls of the old Marshalsea debt prison rising from the past. No one could wish upon you or upon me or upon anyone else the fate of the Father of the Marshalsea. Granted that a stroke of luck got William Dorrit out of that unspeakable place, but the great iron door swung shut on many another of greater character than Dorrit. You really do not want to return to that highly stratified society of mid-Victorian England, at least we surely don't. It is true that all citizens have a right, an unqualified right, to demand value for taxes paid. It is also probably true that the educational community has not done as much as it could to encourage economic efficiency, most could agree with that. Part of the problem though is the complexity of this education business. All service professions have trouble with efficiency and education is no exception. However, when all is said and done, it is not to *Forbes'* interest to disparage spending for public education. Education is the glue that holds this Republic together. If there isn't enough of that glue, and if it isn't spread around far enough, the disparate parts of this body politic will fly into a thousand pieces. Should that happen, there will be no safe haven for business.

Without an adequate and an equitable education we shall not survive in the modern world. Our armies will not work, our international trade will become in worse shape than it already is, our currency will be debased, our financial institutions will collapse. If it were only our own fate that was at stake perhaps it would not be such a tragedy. After all, we would deserve

what we got. But we are the Rome of the modern world. When the "Pax Americana" fails, a second dark age may well come again over the world. In Baron Acton's days the British Lion could, and did, hold the world for democracy and representative government. But while courageous still, that lion is old now, and its fangs are broken, and its claws are not as sharp as they once were. It would be hazardous for democracy to depend upon it alone.

In any event, republics do not have long lives; history clearly shows that empires live longer. The analogy with ancient Rome is particularly troublesome to the mind. Toward its end, Rome imported everything from the world and exported only its arms. We are moving dangerously close to that state of affairs. Toward its end, Rome was banker to the ancient world and could not collect on many of its loans. We may currently share that distinction with several others, not the least of which are the Saudis, but the direction is unmistakable. Toward the end, the "invincible" Roman legions saw their eagle standards disappear beneath the surface of the Rhine and the Danube. One must be blind not to notice that we have not done too well on the shores of the Yalu and the Mekong. Most disturbing of all is the memory of the murder of the tribunes of the people in the second century B.C., which preceded the fall of the Republic and the dictatorship of Sulla. The assassinations of the brothers Kennedy and of Martin Luther King, Jr., come painfully to mind.

There the analogy, thank heavens, breaks down. Thus far, no Caesar has crossed the Rubicon, no Augustus has perverted the institutions of the Republic into that of an Empire. We think—we hope—that is because the disturbances of the 1960's were not the first signs of the type of bloody civil war between the haves and the have-nots that laid the foundation for Julius Caesar and spelled the end of the Roman Republic. Nor are we about to claim that this has not happened in the United States because of an adequately and equitably supported public educational system. But the central theme of the recent reform reports is clearly correct. Indeed, if the thesis of this essay is correct, then more, much more, than a nation is at risk here.

Our conclusion is quite simple. A great many students of government in the past and a fair number of historians have believed that public education is the central pillar in the temple of representative and democratic governance. Only a fool or a madman would set a Samson to pull it down. We do not know if *Forbes* has Samson on the payroll, but we do know that they are neither fools nor madmen. There is one item on which we know we have common ground with the *Forbes* article. We must always and in all cases maintain one kind of "free market." It is that "free market of ideas" to which John Stuart Mill addressed himself in his famous essay, "On Liberty." Without that last and most important free market there is no hope for liberty, freedom, or education. It is to the none-too-tender embrace of that market that we now consign this humble, old fashioned, essay.

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APPENDIX A

A Graphical Exercise in Adequacy and Equity

Sometimes, concepts are more easily understood when expressed in graphic form. We never undertake one of these exercises, however, without remembering the words of John Kenneth Galbraith: "Even the wisest of men can become confused if confronted with a sufficient amount of scientific mumbo-jumbo." Most readers can probably distinguish sufficiently between the concepts of equity and adequacy without this appendix, but for those who like this sort of thing, we offer it as a bow on the Christmas present.

Look at Model A. Let us suppose that we have two states in the union, #1 and #2. In each case we have a simple least squares regression of expenditure per pupil upon some measure of wealth per pupil. The measure of wealth per pupil could be property valuations or it could be family income or it could be some mixture of the two or, indeed, something else. If we assume that equity demands that there be less of a correlation between expenditure and wealth (sometimes called fiscal neutrality or wealth neutrality), then clearly state #1 is closer to that policy goal than state #2. This is true because the slope of line #1 is flatter than the slope of line #2. Looking only at the slopes of the lines, one would have to conclude that state #1 is closer to equity than state #2. If you don't happen to like the game we are playing, you can also think of the same state at two points in time, but let's not complicate matters in a "Victorian" essay. The point to be made is that while state #1 is closer to equity, it may not be closer to adequacy.

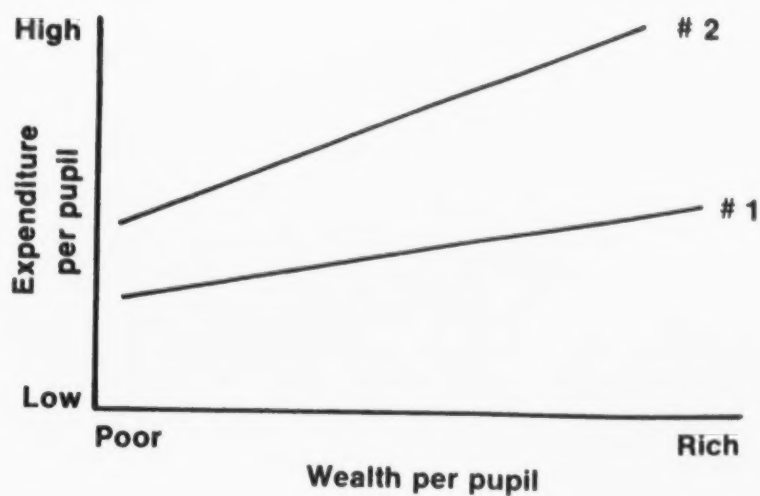
Notice that the level of the lines is different. It is state #2 that spends more than state #1, and if average spending is the definition of adequacy, then state #2 is closer to adequacy and state #1 is closer to equity.

Go now to Model B. (We do not enjoy this exercise, it is too much like writing a computer program which is not at all pleasant for "Victorian" writers, but we will persist.) In Model B we have arrayed state aid per pupil against wealth per pupil. Since the 1920's in school finance this has been called the "equalization" principle, in that states using this principle distribute funds inversely to the wealth of the local district. Forty-eight of the fifty states currently do this. In our example it appears that state #1 has the greater "equalization" and is, therefore, making greater contribution toward the "equity" goal. However, the level of state aid is much greater in state #2. Therefore, it can be argued that in terms of adequacy, it is again state #2 that is closer to adequacy and state #1 is closer to equity. But there is a fatal weakness in Model B. We are only looking at state aid here, and both equity and adequacy are known to be strongly affected by locally raised funds.

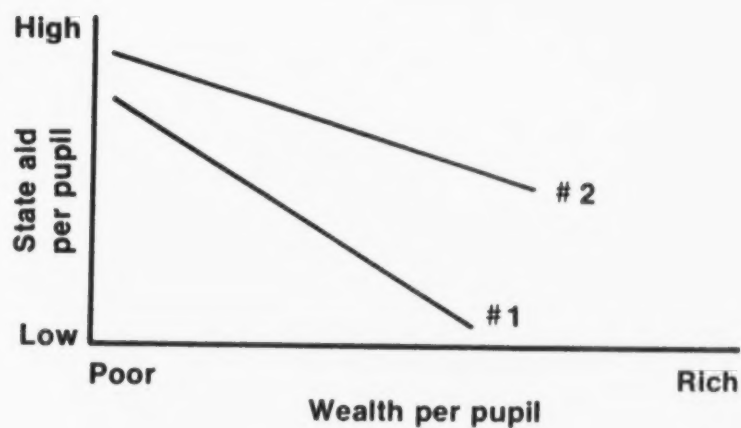
Finally, let us look at Model C. (We propose not to bore you too much longer.) Again we have two states, #1 and #2. This is a univariate model and all we are looking at is the distribution of expenditures per pupil between school districts in two states. Notice that the variance in expenditures per pupil in state #1 is far less than the variance in state #2. We might therefore conclude, by looking only at the variance, that state #1 is again closer to the equity goal than state #2. However, the central tendency, either the mean, the medium, or the mode, is obviously greater in

ADEQUACY VS. EQUITY: SOME THEORETICAL MODELS

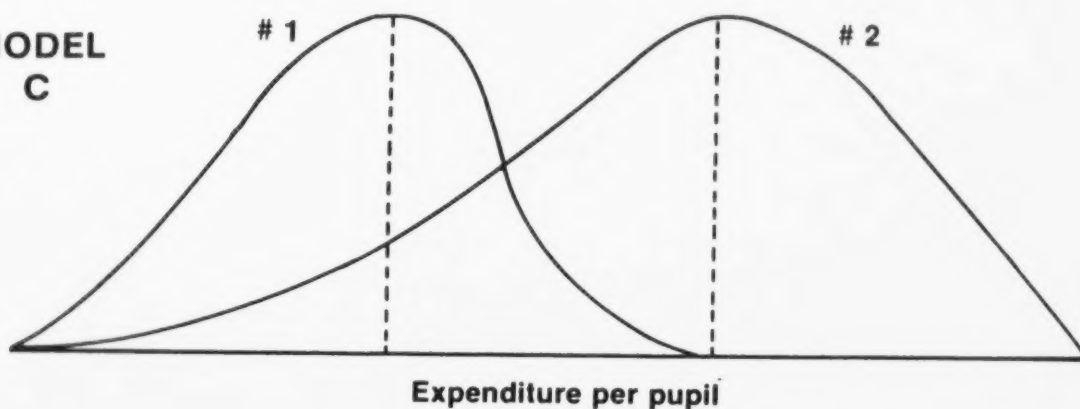
MODEL A



MODEL B



MODEL C



state #2 than in state #1 lending support to the notion that state #2 is closer to the adequacy goal while state #1 is closer to the equity goal.

Now, it is true that our little exercise works only if you assume some reasonable correlation between expenditures and some measure of output. As the work of Hanushek and others clearly demonstrates, there are major problems with that assumption. But all is not lost. If one will go back and substitute test scores for expenditures per pupil in Models A and C, and test scores for wealth per pupil in Model B, the whole thing can be re-run and one will still come to the conclusion that equity and adequacy are not "necessarily" the same thing.

We do not have a simple two-dimensional graphic model for economic efficiency, but we are working on the problem and hope to confuse you with that soon. Quoting a famous mentor of ours who shall be left unidentified, "If the student really begins to crowd you, just turn to the blackboard and draw some more curves."

AN INQUIRY INTO THE NORMATIVE FOUNDATIONS OF
AMERICAN PUBLIC SCHOOL FINANCE

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The field of public school finance is often regarded as being a technical and sterile area of study employing complex mathematics, arcane algebraic formulas, and the magic of computer simulations. It is seen as a refuge for the methodologically minded and something to be avoided by those humanists in education who see their emphasis as being on children, instruction, and qualitative aspects of schooling. Yet, major American public school finance texts stress the role that values play in the field. Johns, Morphet, and Alexander write:

Therefore, the study of the financing of education should not be considered an exercise in statistical analysis or a problem of data storage. The school financing policies of a nation reflect the value choices of the people, the order of priorities they establish in the allocation of their resources, and their political philosophy.¹

Garms, Guthrie, and Pierce argue that public school finance policies are based on fundamental social values such as equality, efficiency, liberty and political responsiveness, and political acceptability.² This emphasis on values should surprise no one, since American public schools have their origin in the religiosity of colonial New England and gained great advances during periods when educational leadership was provided by men and women known for their piety as well as their devotion to public schooling.³ The American public school was born both of religion and revolution. Strong values based in political philosophy permeated the American Revolution and those values survive in the Republic. While public education is not part of the United States Constitution, the values of a society which created that Constitution set the stage for the development of a strong system of public schools. Butts argues that the Revolution was essentially political in nature and that the political values of equality, liberty, and public virtue became principles which "were incorporated into the political community, the constitutional order, and the governments of the independent states and eventually the new nation."⁴ The systems of public education which emerged in the early nineteenth century were designed, in part, to promote the common values of the new nation and to help ensure the viability of the Republic.

The financing of those systems of public education has been inexorably tied with the values and philosophies underlying the systems themselves. Public school finance, seen in this context, is a normative field in that it is concerned with what ought to be. Public school finance specialists prescribe desirable practices and procedures, based on societal goals and cultural values.

The purpose of this essay is to consider the fundamental values which form the foundation of American public school finance and to investigate how those fundamental values have been reflected in the work of some of the

"founding fathers" of the field. The intent is that such an investigation will enlighten the field of public school finance by making clearer where some of our ideas originated, on what they are based, and how they have been regarded through the short history of the field. These connections are important, for "in history, everything is connected; and economic activity in particular cannot be isolated either from the politics and values which surround it, or from the possibilities and constraints which situate it."⁵ Likewise, school finance, with its economic focus, cannot be isolated from politics and values, or from its environmental context.

Foundings

Throughout history there are founding periods during which symbols and values are set which provide the foundation for public decisions in the subsequent period. Rohr holds these founding periods to be political and normative, establishing authority and political myths which later policymakers invoke.⁶ A good example is the elegant set of myths developed around the founding of the city of Rome. These myths provided the fundamental values which guided the governance of Rome over centuries.

For the United States, the period starting with the American Revolution and the Declaration of Independence in 1776 and continuing through the remainder of the eighteenth century is the founding period. Here, the writings and utterances of the Founding Fathers provided a broad set of values which are readily invoked to this day.

The founding period for administration in the public sector in the United States roughly coincided with the Progressive Period in American public life. For public administration, the beginning of this founding period can be marked by the publication of Woodrow Wilson's *Congressional Government* in 1885.⁷ For educational administration, the period from 1890 to 1914 saw the rise of professional administration and educational administration as a conscious activity.⁸ The founding period for public school finance commenced in 1905 with Ellwood P. Cubberley's doctoral dissertation, *School Funds and Their Apportionment*, and extended over the next twenty or so years with the seminal works of Strayer, Mort, and others.⁹ The founding periods in public administration, educational administration, and public school finance are related and are products of the changing attitudes toward the role of government in the Progressive Period. Therefore, the values of progressivism are strongly reflected in the works of the period.

The Foundations of the American Republic

The historian, Arthur Schlesinger, Jr., has written that "The theory of American democracy . . . is that the give-and-take of the democratic process is the best guarantee of wise decisions."¹⁰ This faith in popular democracy was clearly in the mind of even a Federalist plutocrat like John Adams, who wrote that, "It is certain, in theory, that the only moral foundation of government is, the consent of the people."¹¹ The fundamental moral values in the founding of the United States certainly start with the strong commitment of life, liberty, and property, as articulated by Thomas Jefferson in the Declaration of Independence. The concepts of government

and the basic values shared by the Founders were deeply embedded in the works of eighteenth-century political and social philosophers such as Locke, Hobbes, and Montesquieu, as well as in the classic writers such as Cicero and Plato. In spite of political differences over the degree of centralization of government, the power of the central government, the degree of democracy to be tolerated, and the degree of separation of powers and functions in the federal government, there were strongly held, shared values. One political scientist has written of the Founders:

To some degree they all shared a republican concern for a government of excellence, a citizen body of virtue, a public order defined by fundamental law (the constitution, or *politeia*) and conducive to well-being, and a community of moderation in which the governed would neither be abused nor be permitted to abuse themselves.¹²

These common values have been clearly reflected in the American public school with its emphasis on excellence and quality work, virtuous behavior, order, moderation, and moral restraint. These values can be traced directly from the work and writings of John Locke, about whom it has been said:

Among the philosophers of the modern world, John Locke has always been held in especially high regard in America. His influence in the Founding Fathers exceeded that of any other thinker. And the characteristically American attitude toward politics—indeed, toward life—can be thought of as "Lockean," with its deep attachment to the rule of law, to equal rights to life, liberty, and property, to work and enterprise, to religious toleration, to science, progress and pragmatism.¹³

Such a statement could form the preamble for a manifesto for the American public school.

In its development through the nineteenth century, the American public school was a uniquely American institution, embedded in the normative foundations of our political society. Those who ignore the political dimension of the American public school miss the essence of the public school and the reasons for its support. The public school existed, partially, for the advancement of public virtue.

Public virtue entailed firmness, courage, endurance, industry, frugal living, strength, and above all, unremitting devotion to the weal of the public's corporate self, the community of virtuous men. It was at once individualistic and communal: individualistic in that no member of the public could be dependent upon any other and still be reckoned a member of the public; communal in that every man gave himself totally to the good of the public as a whole. If public virtue declined, the republic declined, and if it declined too far, the republic died.¹⁴

The public school emerged as a major institution in society for the development and maintenance of public virtue and as a force to protect the nation from decline and eventually death. The necessity of education to maintain the vitality of American republican democracy and need for a public system of schooling supported by the people were fundamental beliefs in the nineteenth century.¹⁵ Financing of public schools through this period came through a variety of systems, including rate bills (tuition), local property tax revenues, and nascent, emerging systems of state support for local schools.

Throughout most of the nineteenth century, the administration of public enterprises was thought of in a political sense, with a strong moral dimension. In his discussion of what he calls high American statesmanship in this era, Storing describes the "devotion to public duty and an understanding of the principles of governmental structure and operation of the broadest and deepest kind" which characterized nineteenth century American public life.¹⁶ A new approach to public sector administration and the administration and financing of public schools emerged toward the end of the nineteenth century.

The Foundations of American Public School Finance

Public school finance remained very much a local issue during much of the nineteenth century and no comprehensive approach for state funding of schools or no conceptual theory of school finance were developed.¹⁷ The environment for the administration and financing of public schools began to change in the late nineteenth century, as did the larger environment for the public sector in general. Those who study the economic, social, and political development of nations attribute this to the process of modernization.¹⁸ Storing refers to this period as "the decay of rational statesmanship" and marks its beginnings in 1887 with Woodrow Wilson's call for a new science of administration.¹⁹ Others date the commencement of this period with federal civil service reform in 1883, the U.S. Supreme Court decision in 1877 in *Munn v. Illinois* defining the state's regulatory power over private business, or with the closing of the American frontier in 1890. The closing years of the nineteenth century and the opening years of the current century saw a strong interest in the expansion of public services and governmental power and responsibility, an emphasis on good government and rational processes in governmental administration, and a strong regard for efficiency in government and scientific management. The change cast off the older emphasis on governmental administration based on the constitutional and political order and replaced it with the new, apolitical science of administration. Historian Henry Steele Commager calls this period a watershed in American history and a period of transformation of the American mind.²⁰

The manifestation of this phenomenon in public education is well chronicled and was just as profound in its effect on public schools as it was in other areas of the public sector.²¹ It was in this period as well that American public school finance as a conscious area of study began and the birth of public school finance can even be dated with some precision. It can be argued that public school finance as an area of conscious study began in 1905 when both Ellwood P. Cubberley and George D. Strayer received

their doctorates from Teachers College, Columbia University, with both producing dissertations in the area of school finance.

Ellwood P. Cubberley

Cubberley began his dissertation with the sentence, "One of the most important administrative problems of today is how properly to finance the school system of a state, as the question of sufficient revenue lies back of almost every other problem."²² Even this emphasis on state systems of education and finance marked a new departure from the uncoordinated, locally-oriented approach to public schools that largely existed up until this time. Cubberley stated the problem to be addressed by his study as being "whether or not the money now at hand for distribution is distributed in the best manner possible, and whether or not, by a change in the method of distribution, the burdens of support could not be greatly decreased and the minimum requirements at the same time be increased, and this without doing any real injustice to anyone."²³ Cubberley sharply enunciated his view of the education of all children as being in the public interest and in the interest of the state. These interests were to be advanced through a system of state funding which combined state and local tax resources in such a way to provide educational opportunities for all children, state distribution of resources on the basis of need and local effort for schools, and encouragement for local educational experimentation and innovation. Cubberley subscribed to the view of federalism that saw states as the laboratories of democracy and local school districts as educational laboratories, a view that was very prominent among turn-of-the-century Progressives.

Cubberley expressed his educational philosophy and normative approach to financing public schools when he wrote:

Theoretically, all the children of the state are equally important and are entitled to have the same advantages; practically, this can never be quite true. The duty of the state is to secure for all as high a minimum of good instruction as is possible, but not to reduce all to this minimum; to equalize the advantage to all as nearly as can be done with the resources at hand; to place a premium on those local efforts which will enable communities to rise above the legal minimum as far as possible; and to encourage communities to extend their educational energies to new and desirable undertakings.²⁴

Equal educational opportunity is to be provided within the limitations imposed by finite resources. A minimum level of adequacy is to be maintained, with local effort permitted to exceed the minimally adequate level of education. Finally, innovation and experimentation are to be encouraged.

Cubberley was concerned with the basic principle of *educational adequacy*. However, he tempered adequacy considerations with the realities of what a fiscal system could produce in revenues for public schools. He defined adequacy in terms of a minimum level of instruction for all students, which was a far more innovative concept in 1905 than it is today. He also felt that the state should set minimum standards of education that all local districts should follow.²⁵ Cubberley defined adequacy in terms of sufficiency

of educational inputs such as the number and condition of school facilities to availability of instructional materials and equipment, the curriculum and available courses of instruction, the length of the school year and the number of years of schooling provided, the preparation of teachers and their compensation level, supervision of instruction, and the array of school services provided without cost to students.²⁶

As well, Cubberley was concerned with matters of *efficiency*. He stressed the need for local school district accountability before aid would be given.²⁷ This was necessary because, as he stated:

However desirable and even necessary it may be to provide more money with which to maintain the schools of the state, a still more important question is how to distribute the money so as to secure the best results.²⁸

The Progressive Era was one that favored parsimony in the use of public funds and the efficient use of resources was highly valued. Cubberley felt that good schools would cost more money, but that efficient schools would bring better results.²⁹ This results orientation to efficiency stands in stark contrast to popular notions of efficiency as minimizing resource inputs. Both aspects of efficiency are important, but Cubberley was more interested in increasing school outputs and outcomes.

Cubberley valued *equity*. He was greatly concerned about the lack of relationship he saw between the distribution of resources and educational need. He wrote:

Justice and equity demand a rearrangement of the apportionment plan so as to place a larger proportion of aid where it is most needed. There is little excuse for a system of state taxation for education if the income from such taxation is to be distributed in a larger proportion to those communities best able to care for themselves.³⁰

Cubberley did not favor complete equalization of either per pupil resources or education tax rates. He felt equalization was necessary to a point to ensure an adequate education and an equal local tax rate, but that local school districts should have the option, and, in fact, be encouraged to exceed the state minimum levels.³¹ Cubberley stressed the problems of taxpayer equity and was very concerned about the very different tax rates paid by different communities in an effort to fund schools at an adequate level. He called these high tax rates "excessive burdens" and justified general state aid to local school districts on such equity grounds:

That these excessive burdens, borne in large part for the common good, should in part be equalized by the state. To do this some form of general aid is necessary.³²

Cubberley favored use of state funds for equalization of local school spending, rather than county funds, because of the state's broader revenue raising ability, the state's responsibility for the general welfare of its population, and the state's responsibility for setting educational standards (and, ostensibly, tying funding to the standards). Cubberley, however, was

ever vigilant that whatever state funding mechanism he employed, it not discourage local taxing effort for public schools.

Two additional values are embedded in Cubberley's work, but they are both less obvious and have been little discussed. Cubberley continually stressed in *School Funds and Their Apportionment* the need to allow local discretion in tax rates, local experimentation and innovation in education program decisions, and local school governance. This was written at a time when there were pressures in American society toward centralization of government functions and authority, but Cubberley shows great deference to the fundamental value of *liberty*. Liberty is freedom from undue constraint on individuals or governments from higher levels of government and Cubberley seemed genuinely sensitive to this issue. Liberty issues were raised later in conjunction with movements toward privatization of schooling, but Cubberley regarded it only in the context of the public sector.

Also inherent in Cubberley's writings is the value of *legitimacy*. Legitimacy is not used here in a constitutional or legal sense, but in a political sense. People support institutions that they perceive to be legitimate in the manner in which they operate. Cubberley stressed throughout his work the necessity of being flexible in light of local differences, economic conditions, local conditions, and political conditions. He spoke of distribution of *revenues available*. Supervision and accountability were important to him. These all enhance the legitimacy of public schools in that they present a reasonable system that makes sense to the people, its ultimate support, and provides a mechanism to show that the system works as it should.

The contribution of Cubberley to American public school finance was his conceptualization of a state system of providing aid to local school districts and the justification of that system. He set the normative foundations for the field in the sense that the basic values he espoused for school finance, adequacy, efficiency, equity, liberty, and legitimacy have remained the dominant values in school finance policy. Cubberley's specific funding mechanisms have been criticized, but his underlying value structure provide the normative foundations for public school finance in the United States.

George D. Strayer, Sr. and Paul Mort

As mentioned above, Strayer also received his Ph.D. from Teachers College, Columbia University, in 1905. His dissertation, also in finance, was entitled *City School Expenditures*. The title implies an interest and concentration on practical issues and, in fact, Strayer was noted for "his concern . . . with the practical immediate problems in the field of school administration."³³ Strayer's contribution to the normative foundations of American public school finance rest with his extension of Cubberley's ideas to the development of detailed concepts for a state funding distribution system.

Cubberley seemed more preoccupied with concepts of adequacy and efficiency. His views about equity, liberty, and legitimacy were less well developed. Mort and Reusser point out that Strayer and his collaborator, Robert M. Haig, provided a new frame of reference for consideration of state school finance systems and that this frame of reference was nearly hidden in their study of New York school finance.³⁴ This new frame of reference was

the use of the concept of equal educational opportunity as the basis for school finance and administration, concentrating on (1) ensuring some minimally adequate level of education for all children, (2) a state system of funding using an equalization mechanism to compensate for local school district ability to pay, and (3) state supervision and control of local school districts. The mechanism for achieving this mission was a state funding mechanism that became known as the foundation formula or the Strayer-Haig formula. In its original conception, it consisted of the following elements:

1. A local school tax in support of the satisfactory minimum offering would be levied in each district at a rate which would provide the necessary funds for that purpose in the richest district.
2. This richest district then might raise all of its school money by means of the local tax, assuming that a satisfactory tax, capable of being locally administered, could be devised.
3. Every other district could be permitted to levy a local tax at the same rate and apply the proceeds toward the costs of schools, but—
4. Since the rate is uniform, this tax would be sufficient to meet the costs only in the richest districts and the deficiencies would be made up by state subventions.³⁵

This foundation program, developed by Strayer and Haig and based on the normative foundations set by Cubberley, became the standard approach to state equalization formulas for half a century. Subsequent variations in state equalization formulas, such as guaranteed tax base formulas, percentage equalizing formulas, and others, are all conceptually identical to the Strayer-Haig foundation formula.³⁶

Paul Mort added another dimension to the Strayer-Haig foundation formula. Mort was a student of Strayer at Teachers College, Columbia University, and his doctoral dissertation, completed in 1924, was on *The Measurement of Educational Need*.³⁷ Mort defined a minimally adequate education in terms of special student needs, pupil-teacher ratios, cost variations, sparsity factors, and school facility and size. He is responsible for the concept of the weighted pupil. Mort expanded upon the concept of adequacy and linked it conceptually to the value of equity.

The School Finance Theorists and Normative Foundations

The work of Cubberley, Strayer, Mort, and their colleagues set the normative foundations for the field of American public school finance. Their writings and their work were based on the fundamental values of adequacy, efficiency, equity, liberty, and legitimacy. American public school finance today operates according to an agenda based on this same set of normative foundations. Efficiency concerns were paramount from the beginning of this century through the 1950s, with a focus on state standards and the relationship of costs to effective delivery of educational services.

Beginning with *Brown v. Board of Education* and extending through the Great Society Programs of President Lyndon B. Johnson and into the 1970's, equity was in ascendance with educational administrators, policymakers, and finance specialists preoccupied with questions of access, expansion of equal opportunity, and democratization of the public school. Finally, beginning around 1980, we find a shift in emphasis to adequacy issues such as quality, excellence, and academic competency.³⁸ Liberty concerns have emerged from time to time concerning the right to send children to non-public schools in the 1920s, interest in tuition tax credits and vouchers in the 1970s and 1980s, and continual battles against loss of local control. The competency and accountability movements speak to legitimacy. These normative values are not necessarily in conflict with one another, but exist in creative tension. As Cubberley indicated, each is important in the design and implementation of school finance systems, but at various times in our history one or the other of these fundamental values may dominate. The choice of which value will dominate is often heavily influenced by environmental events and circumstance. It is understandable that efficiency concerns seemed most important in periods where particularly scarce resources (the Great Depression) or rapid systemic growth (late 1940s and 1950s) were present. The strong emphasis on equity in public schooling paralleled the period in American history characterized by the civil rights movement, social activism, and the general breakdown of older, discriminatory limitations on human activity. Concerns in society with international economic competition and economic growth and development coincided with an educational emphasis on adequacy. Liberty and legitimacy issues continually arise.

These observations are not new to any astute observer of public education policy or public school finance. What is important here is to understand that the fundamental values undergirding American public school finance, as reflected in the issues and the language of the policy debates, have not changed since the time of Cubberley. These values were set in the founding period of American public school finance and they have endured to this day. Even proponents of radical change in school finance systems, such as Milton Friedman and John Coons, invoke the values of adequacy, efficiency, equity, liberty, and legitimacy in making their arguments. Just as the Founding Fathers of the American Republic laid down the normative foundation for the political society in which we live, the founders of American public school finance in a different era frame our school finance debates today.

Yet, these two founding periods are not unconnected. The normative foundations of American public school finance are embedded in the normative foundations of the nation. Fundamental American concerns for fairness and equal rights under a constitutional and legal order are mirrored in equity concerns in school finance. School finance efficiency is rooted in a more basic sense of frugality, concern for virtue and the public well-being, and a latent distrust of opulence and excessive governmental activity and spending. There is a clear relationship between the Founding Fathers' obsession with liberty and distrust of higher forms of centralized government and the school finance regard for efficiency in the use of public resources and local control over school funds. Adequacy as a value in school finance is traced to the high regard the Founding Fathers gave to quality and excellence and public virtue. All this rests in the consent of the governed. Cubberley, especially, was so careful to protect and maintain local control of schools, within the bounds of state standards, and to ensure that local

school districts would have the flexibility and resources to experiment, innovate, and develop programs to meet locally determined needs. Just as the Founding Fathers knew that Americans in the late eighteenth century would not accept a new governmental system they did not regard as legitimate, the foundations of American public school finance provide the basis for building legitimate state system of financing schools. Legitimacy in school finance has been obtained partially by congruence with the founding values of American political society. Equalization of local school district spending levels, for example, is easier to legitimate with the public and with legislators if supported by arguments for fair play and equal treatment than they are if argued on the basis of an abstract appeal for the need for per pupil expenditures with certain narrow dollar ranges, or on the basis of statistical equity measures. A recognition of the strong liberty value among Americans makes bringing spending levels for districts below the state average up to the state average easier than arguing for capping spending in wealthy districts as a means of achieving equity.

Normative Foundations and Contemporary Public School Finance

A review of the normative foundations of American public school finance may be nothing more than a matter of historical or theoretical interest if they provide little practical relevance for development of public school finance policy in a contemporary setting. Weiss maintains that all public policy results from the interplay of interests, information, and ideology.³⁹ Interests are self-interests and they consist of interests in power, reputation, and financial reward. School finance specialists clearly recognize the dominance of self-interest when they see legislators, school administrators, and school board members evaluate school finance policy options on the basis of "printout politics," or the way in which an option affects a certain district or group of districts. Sometimes school finance researchers become very enamored with information, as provided by computer simulations, statistical analyses, and econometric research. Weiss admonishes that:

The imperative of democratic decisionmaking is to accommodate the interests and ideologies represented in society . . . [because it is] more important to negotiate decisions that are at least minimally satisfactory to significant segments of the population than to reach some scientifically "best" solution that will provoke significant cleavages.⁴⁰

Information is not all powerful and it is tempered by interests and ideology as decisions are made through the public policy process. We often recognize the interests involved, but overlook the power of ideology. Ideology includes those basic, or founding values which frame our way of thinking about issues. It is important to recognize and respect those values in developing and presenting school finance policy options and conclusions. Weiss says that "there is a high symbolic value in requesting information and justifying decisions on informational grounds."⁴¹ There is likewise great symbolic value in framing arguments and justifying decisions on the grounds of the normative foundations of the field.

American public school finance is a value-laden field based on a normative foundation which dates from the work and writings of preeminent school finance pioneers in the early years of this century. The contributions of Cubberley, Strayer, and Mort are still fundamental parts of the field, but yet are often overlooked in the rush of immediate decision needs and the pervasiveness of high technology. In public school finance policymaking, these founding values form part of the ideology which interplays with interests and information to form policy.

Conclusion

This article is entitled an inquiry. It is a query, a quest for truth in some manner. Both public administration and educational administration recently have seen periods with overemphasis on quantitative methods, technical analyses, and narrow research thrusts. Both fields have seen a renewed interest in ethics, the humanities, and social and political philosophy. The two-hundred-year anniversary of the United States Constitution merits a reflective interlude and some look backward. This article, in a most modest way, is an attempt to provide some of that in the field of American public school finance. Public school finance in a democracy is a function of politics as well as of economics. This brief inquiry does suggest that school finance policy issues are as deeply embedded in our political philosophy and in the history of the Republic as they are in economics and technical analysis. While issues change, the consideration of American public school finance policy will continue to be influenced by the interplay of the founding values of efficiency, adequacy, equity, liberty, and legitimacy.

Notes

¹Roe L. Johns, Edgar L. Morphet, and Kern Alexander, *The Economics and Financing of Education* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1983), p. 1.

²Walter I. Garms, James W. Guthrie, and Lawrence C. Pierce, *School Finance: The Economics and Politics of Public Education* (Englewood Cliffs, NJ: Prentice-Hall, Inc., 1978), pp. 11-14.

³See David Tyack and Elisabeth Hansot, *Managers of Virtue: Public School Leadership in America, 1820-1980* (New York: Basic Books, Inc., 1982).

⁴R. Freeman Butts, *Public Education in the United States: From Revolution to Reform* (New York: Holt, Rinehart and Winston, 1978), p. 9.

⁵Jose Gentil da Silva, as quoted in Fernand Braudel, *The Perspective of the World: Civilization and Capitalism, 15th-18th Century* (New York: Harper and Row, 1984), p. 19.

⁶John A. Rohr, "The Administrative State and Constitutional Principle." Paper presented at the 1983 annual meeting of the American Political Science Association, Chicago, IL, September 1983.

⁷Woodrow Wilson, *Congressional Government: A Study in American Politics* (Boston: Houghton-Mifflin, 1885).

⁸Tyack and Hansot, chapters 9-11; Butts, pp. 176-181.

⁹Ellwood P. Cubberley, *School Funds and Their Apportionment* (New York: Columbia University, 1905); George D. Strayer and Robert Murray Haig, *The Financing of Education in the State of New York* (New York: Macmillan, Inc., 1923); Paul R. Mort, *The Measurement of Educational Need* (New York: Columbia University, 1924).

¹⁰Arthur M. Schlesinger, Jr., *The Cycles of American History* (Boston: Houghton-Mifflin Co., 1986), p. 312.

¹¹Letter of James Sullivan, May 26, 1776, as quoted in Forrest McDonald, *Novus Ordo Seclorum: The Intellectual Origins of the Constitution* (Lawrence, KS: University of Kansas Press, 1985), p. 161.

¹²Benjamin R. Barber, "The Compromised Republic: Public Purposelessness in America," in *The Moral Foundations of the American Republic*, ed. Robert H. Horwitz (Charlottesville, VA: University Press of Virginia, 1986), pp. 43-44.

¹³Maurice Cranston, "Locke and Liberty," *The Wilson Quarterly* 10 (Winter 1986):82.

¹⁴Forrest McDonald, *Novus Ordo Seclorum: The Intellectual Origins of the Constitution*, pp. 70-71.

¹⁵Lawrence A. Cremin, *American Education: The National Experience, 1783-1876* (New York: Harper and Row, 1980), chapter 5.

- ¹⁶Herbert J. Storing, "American Statesmanship: Old and New," in *Bureaucrats, Policy Analysts, Statesmen: Who Leads?*, ed. Robert A. Goldwin (Washington, D.C.: American Enterprise Institute for Public Policy Research, 1980), p. 98.
- ¹⁷Roe L. Johns, "The Development of State Support for the Public Schools," in *Financing Education: Fiscal and Legal Alternatives*, eds. Roe L. Johns, Kern Alexander, and K. Forbes Jordan (Columbus, OH: Charles E. Merrill Publishing Co., 1972), p. 2.
- ¹⁸Douglass C. North, *Structure and Change in Economic History* (New York: W. W. Norton and Co., 1981), pp. 188-193.
- ¹⁹Storing, p. 96.
- ²⁰Henry Steele Commager, *The American Mind: An Interpretation of American Thought and Character Since the 1880's* (New Haven, CT: Yale University Press, 1950), chapter 2.
- ²¹For example, see Tyack and Hansot, chapters 11 and 12; Butts, chapter 7; and Raymond E. Callahan, *Education and the Cult of Efficiency: A Study of the Social Forces That Have Shaped the Administration of the Public Schools* (Chicago: University of Chicago Press, 1962).
- ²²Cubberley, *School Funds and Their Apportionment*, p. 3.
- ²³*Ibid.*, pp. 17-18.
- ²⁴*Ibid.*, p. 17.
- ²⁵*Ibid.*
- ²⁶*Ibid.*, pp. 24-25.
- ²⁷*Ibid.*, p. 219.
- ²⁸*Ibid.*, p. 3.
- ²⁹Callahan, p. 184.
- ³⁰Cubberley, pp. 3-4.
- ³¹*Ibid.*, p. 219.
- ³²*Ibid.*, p. 250.
- ³³Callahan, p. 185.
- ³⁴Paul R. Mort and Walter C. Reusser, *Public School Finance: Its Background, Structure, and Operation* (New York: McGraw-Hill Book Co., Inc., 1941), pp. 392-383.
- ³⁵Strayer and Haig, *The Financing of Education in the State of New York*, pp. 175-176.
- ³⁶For a discussion of the conceptual equivalence of school finance formulas, with examples, see Peter Jargowski, Jay Moskowitz, and Judy Sinkin, "School Finance Reform: Decoding the Simulation Maze," *Journal of Education Finance* 3 (Fall 1977):199-213.
- ³⁷Mort, *The Measurement of Educational Need*.
- ³⁸Douglas E. Mitchell and Dennis J. Encarnation, "Alternative State Policy Mechanisms for Influencing School Performance," *Educational Researcher* 13(4):5.
- ³⁹Carol H. Weiss, "Ideology, Interests, and Information: The Basis for Policy Positions," in *Ethics, the Social Sciences, and Policy Analysis*, eds. Daniel Callahan and Bruce Jennings (New York: Plenum Press, 1983), pp. 220-21, 228.
- ⁴⁰*Ibid.*, p. 222.
- ⁴¹*Ibid.*, p. 234.

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